LIGHT & MOTION

Product Manual

Seca 900 Ultra
Seca 900
Seca 700 Ultra
Seca 700
Seca 400

CAUTION

A good lighting system can make cycling in the dark safer, but the best way to be safe is to ride defensively.

- When not in use, ALWAYS unplug the light head from the battery. When unplugging the light head cable from the battery, always pull the connector, not the cable.
- ONLY use Light & Motion chargers to charge your Light & Motion batteries. Failure to do so will void the warranty and damage the system.

Congratulations!

You've purchased what we consider the best multi-emitter bicycle lighting system available – the Light & Motion Seca. We hope that your new light will inspire you to leave your car at home, rediscover your old stomping grounds, and ride your bike year-round.

To receive maximum benefit from your Light & Motion system, please take a moment to read these instructions.

Warranty

Light & Motion provides warranties against manufacturer defects for 2 years on all Seca light heads, and for 6 months on batteries starting from the date of purchase. While the warranty is non-transferable and does not cover failures from misuse, damaged lights can usually be repaired for a nominal fee.

Returning Products for Warranty Evaluation & Repair

Should your system malfunction for any reason, please submit a service request to the Light & Motion service department at: www. bikelights.com/service. We will contact you within 24 business hours to finalize the arrangements for your repair. When returning your system, please make sure to unplug the battery from the light before shipping. All warranty and repair products should be returned, with proof of purchase from an authorized dealer to:

Light & Motion
RMA#_____
300 Cannery Row
Monterey, CA 93940

International customers, please contact your local bicycle dealer for warranty and return instructions. A list of international distributors can be found on the Light & Motion website at www.bikelights.com.

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Seca Lighting Systems

Please take a moment to verify the contents of your Light & Motion lighting system.

Seca 900 Ultra & Seca 900:

1. Seca 900 LED light head (white fins)
3. 11.1v 6-cell Li-ion battery
   or
4. 11.1v 9-cell Li-ion battery
5. Light & Motion Multi-Chem Charger
7. Helmet mount
8. Slimline battery mount (Ultra only)
9. Hook-and-Loop Bomber Strap
10. Spare break-away disks (2)

Seca 700 Ultra & 700:

1. Seca 700 LED light head (red fins)
3. 11.1v 6-cell Li-ion battery
   or
4. 11.1v 9-cell Li-ion battery
5. Light & Motion Multi-Chem Charger
7. Helmet mount
9. Hook-and-Loop Bomber Strap
10. Spare break-away disks (2)

Seca 400:

1. Seca 400 LED light head (grey fins)
2. 11.1v 3-cell Li-ion battery
6. Light & Motion Mini-L Charger
7. Helmet mount
9. Hook-and-Loop Bomber Strap
10. Spare break-away disks (2)

Charging

Always fully charge your battery before its first use. Batteries are shipped only partially charged and must be fully charged to achieve the proper run time. Take this time to familiarize yourself with our smart charger and what the status indictor LED's mean.

NOTE: All Light & Motion Li-ion chargers are ONLY compatible with Light & Motion batteries.

The battery may be left on the Multi-Chem or Mini-L charger indefinitely, without harming the battery.

NOTE: All Lithium-Ion batteries lose charge very slowly over time. And, Lithium-Ion batteries retain their charge best when stored at about 40-60% capacity. For maximum performance, charge your battery immediately after a ride, remove it from the charger for storage, and then top it up the day of your next ride. If storing for extended periods, we recommend a top-up charge once a month.

Charging with the Multi-Chem Charger

1. Plug the power cord into the charger and then into the appropriate wall socket.
2. Attach the battery to the Multi-Chem Charger by aligning the colored arrow on the plug from the charger with the red dot or arrow on the Li-ion batteries (fig. 1), inserting the plug into the battery's socket.
3. Once the battery is attached to the Multi-Chem Charger, an orange LED will illuminate on the right side and a green LED will illuminate on the left side of the charger indicating the battery is receiving a charge.
4. When both LED's illuminate green, this is an indication the battery is fully charged.

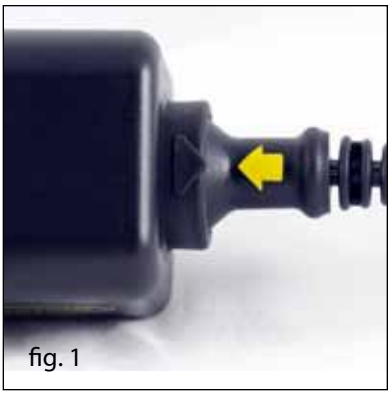
fig. 1

fig. 2

An alternating orange/green LED indicates an error. If this happens, remove the battery, unplug the Multi-Chem Charger from the wall and wait about 5 minutes. Then try to charge the system again. If you see the same error, please contact the Light & Motion service department. If no indicator light comes on, make sure the connector is fully seated. We have the most water-resistant connector in the industry, and sometimes you need to "burp" the air trapped under the connector.

NOTE: The Multi-Chem Charger will charge a fully depleted battery in approximately the following duration:

3-cell 01:75 hours
6-cell 02:00 hours
9-cell 03:00 hours

Charging with the Mini-L Charger

1. Plug the charger body into a wall socket
2. Attach the battery to the Mini-L charger by aligning the colored arrow on the plug from the charger with the orientation indicator on the battery (red dot, or groove), inserting the plug into the battery's socket (fig. 2).

Charging with the Mini-L Charger (cont'd)

3. A red LED will illuminate, indicating the battery is receiving a charge.
4. When the indicator LED turns green your battery is fully charged.

A quick flash (0.1 seconds every second) indicates the battery has very low voltage, and the charger is attempting to recondition the battery for charging.

A slow blink (0.5 seconds every 4 seconds) indicates a defective battery, and you should contact the Light & Motion service department. If no indicator light comes on, make sure the connector is fully seated. We have the most water-resistant connector in the industry, which requires a firm insertion to burp the trapped air and complete the sealed connection. If the LED on the charger still does not illuminate, the charger does not recognize the attached battery as valid for charging (older NiMH batteries).

The Mini-L Charger will charge a fully depleted 2 or 3 cell battery in about 6 hours.

Installation of the Seca Light System

Installing Seca On Your Bicycle

Your Light & Motion Seca light head comes with a universal bar mount. Ideally, Seca should be mounted as close to the stem as possible without interfering with your brake and shifter layout. Ideally, Seca should be mounted as close to the stem as possible. After determining the proper location, wrap the strap under and around the handlebar, feeding it back up through the buckle loop on the

fig. 3

fig. 4

mount (fig. 3). Pulling the strap firmly through the loop, fold the tail down until it snaps over the locking post (fig. 4).

NOTE: Tighten the strap only enough to prevent slipping around the bar. Pulling the strap too tight can eventually weaken the part and cause a premature failure.

To remove, simply release the strap from the locking post and slip the tail completely through the buckle loop, feeding the light from the handlebar.

Installing Seca on a Helmet

The Helmet mount is designed to be mounted on any standard, vented bicycle helmet. Position the base of the light head on top of the helmet, in the middle and slightly forward of center. Slide the hook and loop strap down through the proper vent, back up through the opposing vent, and finally through the slot in the base of the mount (fig. 5). Pull the strap tight and slide it back down the vent and affix it to the "loop" side of the strap inside the helmet (fig. 6). Now install Seca just like you would on a handlebar (see instructions "Installing Seca onto your bike").

Installation of the Seca Battery

Frame-Mounted Battery

All Light & Motion batteries are designed to mount on a bicycle frame tube or seatpost. Figure 7 shows the curved mounting surface on the 3-cell and 6-cell batteries which are designed to rest against the bicycle tube (reference fig. 8 for the orientation of the 9-cell battery pack). Pull tightly on the strap and affix the end of the strap to itself via the hook-and-loop mounting surface. Wrap any excess around the battery until the entire strap is secured.

fig. 5

fig. 6

fig. 7

fig. 8

There should be enough tension on the strap to prevent the battery from moving freely on the tube or seatpost.

When routing the plug, you may choose to loosely coil the excess cable around the frame (fig. 9). Make sure the cable has enough slack to move freely when your handlebar is turned in the furthest position (run the cable first over the handlebar, then back to the battery). This will prevent damaging your light head in a crash.

Body-Mounted Battery

The battery pack is designed to be carried in a jersey pocket or hydration pack.

HINT: Running the power cord through one of the back vents of your helmet before connecting it to your battery will keep the cord from sliding from side to side.

CAUTION

NEVER attach a helmet mounted light to a frame mounted battery, or a frame mounted light to a body mounted battery.

fig. 9

fig. 10

Plugging Seca into the Battery

Plug the light head cable into the socket on top of the battery by aligning the cable's arrow to the battery's orientation mark (a dot, groove, or arrow – fig. 10). Due to the high quality seal of our connector, occasionally air compressed within the battery socket can push the cable back out. Make sure the socket has "burped" this air for the reliable, trouble free connection Light & Motion lights are known for.

CAUTION

NEVER attach a helmet mounted light to a frame mounted battery, or a frame mounted light to a body mounted battery.

The adjustability of the Light & Motion bar mount and light head allow it to resist varying degrees of impact. If the light head receives a hard enough impact, it is designed to break away from the mount, thus protecting the main components.

To replace the break-away disk, remove the Phillips head screw from the underside of the mount, and replace the break-away disk (two additional disks are included). Align the track on the disk with the cut out on the light head and secure using the supplied Phillips head screw.

Break-Away Disc Replacement

For additional replacement parts, contact Light & Motion via our website at www.bikelights.com.

Seca Light System Operation

Normal Operation

The Light & Motion Seca LED lights all have one switch on the top of the head that controls power. A brief button push activates "Cruise" mode where you will find 4 settings: High, Medium, Low, and Flash. A single click cycles through each of these settings. Because our riders are versatile cyclists, we design our lights to accommodate those needs. Seca also has a "Race" mode you can enter by pushing and holding the button to turn on. Race mode has only 2 settings: High and Low, with a single click cycling between them. In either mode, pushing and holding the button for 1-2 seconds will turn off the light.

NOTE: The LED emitters and supporting circuitry used in Seca emit a weak electromagnetic field and may interfere with some wireless cycle computers and heart rate monitors.

Aiming Your Light

Light & Motion creates lights with optics designed to reflect the maximum amount of light and direct to where a rider needs it most. Seca takes this one step further and introduces our proprietary Gem-Beam footprint of light, which clips light from where you don't need it and redistributes it where you do.

For best results at lower speeds, position your light so that you get ample fill/peripheral light in front of the tire from the flood portion of the beam. For faster speeds, you can position it slightly higher so that the spot portion of the beam shoots farther down the road giving you enhanced depth perception and a long line of site.

Seca Light System Operation (cont'd)

Battery Discharge Protection

All Light & Motion lights incorporate a battery discharge protection circuit. If the battery becomes discharged, the light head will automatically dim down to try and preserve battery life, and eventually shut off to protect the battery.

Low Battery:

Seca lets you know your battery is low in three ways:

1. A drop in light output,
2. A slow steady blink from the indicator light in the button,
3. A warning flash from the main LED's.

Once in low battery mode, the indicator light will blink for the remainder of the ride, and the main LED's will flash every minute as a warning (for when your light is helmet mounted). You can easily over-ride this main LED warning flash by simply pressing the button. We don't want you to be surprised by a low battery.

Dead Battery:

Seca also lets you know when you only have a few minutes left of burn time, similar to the low battery warning. You will see another drop in light output, another warning flash from the main LED's, and the button indicator will begin blinking rapidly. As with the low battery mode, you can over-ride the warning flash from the main LED's and select any light output level you want.

Auto Shut-off:

When Seca can't stay on any longer without damaging the battery, it will shutoff with a slow fade out to give you time to hit the brakes and stop safely.

Recycling Instructions

This product contains components that may not be disposed of as unsorted municipal waste and must be reused or recycled per the requirements of the European Union Directive 2002/96/EC on waste electrical and electronic equipment (WEEE). The logo to the right indicates that the product must be returned for the reuse or recycling.

Please contact the store where your product was purchased to determine how and where to return the product for recycling.

Light & Motion thanks you for helping us manage the recycling of these components in order to keep the environment clean.

Performance Specifications

Seca 900 Ultra				
Setting	High	Medium	Low	Flash
Lumens	900	450	225	n/a
Run Time	03:30	07:00	14:00	100+

Seca 900				
Setting	High	Medium	Low	Flash
Lumens	900	450	225	n/a
Run Time	02:30	05:00	10:00	100+

Seca 700 Ultra				
Setting	High	Medium	Low	Flash
Lumens	700	350	175	n/a
Run Time	04:25	08:30	17:00	100+

Seca 700				
Setting	High	Medium	Low	Flash
Lumens	700	350	175	n/a
Run Time	03:00	06:00	12:00	100+

Seca 400				
Setting	High	Medium	Low	Flash
Lumens	400	200	100	n/a
Run Time	02:00	04:00	08:00	100+

Light & Motion Parts and Accessories

Batteries

804-0079	11.1v 9-cell Li-ion Ultra Battery
804-0065	11.1v 6-cell Li-ion Battery
804-0087	11.1v 3-cell Li-ion Cub Battery
804-0118	7.4v 2-cell Li-ion Battery Pack

Chargers

804-0090	Multi-Chem Turbo Charger
804-0107	Mini-L Smart Charger
804-0056	DC to AC Car Adapter
804-0122	International Adapter Kit for Mini -L Charger

Accessories

826-0277	Seca 900 Light Head only
826-0263	Seca 700 Light Head only
826-0271	Seca 400 Light Head only
826-0266	Stella 200 Light Head only
826-0282	Stella 300 Dual Light Head only
826-0281	Stella 150L Light Head only
804-0108	Seca/Vega Spare Bar Mount
804-0110	Stella Spare Bar Mount
804-0120	Seca/Vega Spare Strap
804-0109	Helmet Mount (Seca/Vega/Stella)
804-0095	Multi-Sport Head Strap (Seca/Vega/Stella)
804-0111	Travel/Storage Case
826-0150	Break Away Disk Kit (2 per kit)
634-0012	Battery Strap (Velcro)

Additional Light & Motion Products

Light and Motion designs and manufactures innovative, high performance bike lighting systems for commuting, pleasure riding, and racing both on-road and off. Currently our lighting systems range in light output from 120 to over 900 lumens.

Our Lithium-ion batteries are for the most part interchangeable across our line of Li-ion light heads. This means you can add a Seca or Stella Li-ion light head to your current Light and Motion battery/charging system and/or vice-versa.

Please visit our website www.bikelights.com for information on new products and opportunities to further enhance your lighting system.

LIGHT & MOTION

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